



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/514,040	02/25/2000	Jorg Schultz	637.0002USU	7594

7590 05/09/2003

Charles N J Ruggiero Esq  
Ohlandt Greeley Ruggiero and Perle LLP  
9th Floor  
One Landmark Square  
Stamford, CT 06901-2682

EXAMINER
----------

EL SHAMMAA, MARY A

ART UNIT	PAPER NUMBER
----------	--------------

2881

DATE MAILED: 05/09/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/514,040

Applicant(s)

SCHULTZ, JORG

Examiner

Mary A. El-Shammaa

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-61 and 63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-34, 38-47, 53, 59, 61 and 63 is/are rejected.
- 7) ☒ Claim(s) 35-37, 48-52, 54-58 and 60 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2-25-00 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 5, 6. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Claim 62 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group or species, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 8.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 31-34, 38-47, 53, 59, 61, and 63 are rejected under 35 U.S.C. 102(a) as being anticipated by Schultz et al. (6,198,793).

Regarding claim 31 and 43, Schultz et al. discloses in the figures, an illumination system for scanning lithography comprising a light source emitting light with a wavelength less than or equal to 193nm, an optical element for receiving light and for illuminating a field adapted to a scanning direction in an image plane, and a field lens group being provided next to the field, wherein the field lens group is shaped to distort the field, and wherein said distortion is perpendicular to said scanning direction (Col. 1, Lines 12-14, 56-65, Col. 2, Lines 10-21, 33-61, Col. 3, Lines 46-51, Col. 4, Lines 5-14, Col. 7, Line 52 through Col. 8, Line 21, Col. 11, Lines 36-43, Col. 16, Lines 44-54, Col. 22, Lines 19-30).

Regarding claims 32-34, and 44, Schultz et al. discloses the field lens group comprising a field lens (12) or a field mirror (32), wherein the field mirror has a toroidal shape, wherein the field lens group has a predetermined energy distribution (Col. 2, Lines 10-19, Col. 3, Lines 46-51, Col. 4, Lines 28-33, Col. 5, Lines 13-20, Col. 7, Lines 53-55, Col. 8, Lines 15-45, Col. 9, Lines 48-59, Col. 10, Lines 48-56, Col. 16, Lines 44-67, Col. 20, Lines 60-62, Col. 22, Lines 36-38).

Regarding claims 38 and 61, Schultz et al. discloses the image plane having a scanning energy with uniformity in the range of  $\pm 7\%$  (Col. 18, Lines 8-9, Col. 21, Lines 26-30).

Regarding claims 39 and 53, Schultz et al. discloses the field lens group is shaped so that the aperture stop and the plurality of secondary light sources are imaged in a predetermined exit pupil (Col. 7, Line 53 through Col. 8, Line 4, Col. 16, Lines 44-54).

Regarding claims 40-42, Schultz et al. discloses a field lens group capable of changing the shape of the field, such that the field has a rectangular shape or a ring field (Col. 3, Lines 34-39, Col. 4, Lines 10-12, 21-27, Col. 8, Lines 2-4, 25-33, Col. 9, Lines 29-31, 48-52, Col. 10, Lines 51-53, Col. 11, Lines 36-57, Col. 12, Lines 33-35, Col. 16, Lines 44-49).

Regarding claims 45- 47, Schultz et al. discloses an optical transforming component comprising a mirror having a plurality of mirror elements, including a grazing incidence mirror, for generating a plurality of secondary light sources (Col. 2, Lines 10-53, Col.9, Lines 48-67, Col. 16, Lines 50-67).

Regarding claim 59 and 63, Schultz et al. discloses a method for producing microstructured devices by lithography and a projection exposure system for scanning microlithography comprising the illumination system of claim 31, a mask on a first support

Art Unit: 2881

system, a projection objective, and a light-sensitive subject on a second support system (Col. 24, Lines 22-67).

***Allowable Subject Matter***

Claims 35-37, 48-52, 54-58, and 60 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (5,982,558), (5,920,380), (5,844,727), (4,883,352).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. El-Shammaa whose telephone number is 703.308.0851. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on 703.308.4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9318 for regular communications and 703.872.9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.872.9317.

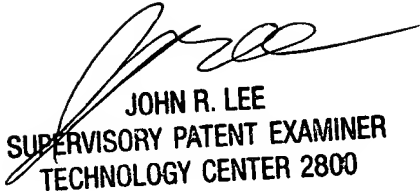
Application/Control Number: 09/514,040

Page 5

Art Unit: 2881

mae

April 25, 2003



JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800